

MULTIMEDIA



UNIVERSITY

STUDENT IDENTIFICATION NO

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MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2018/2019

BBF2134 – FINANCIAL MARKETS AND INSTITUTIONS
(All sections / Groups)

22 OCTOBER 2018

2.30 p.m – 4.30 p.m
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This Question paper consists of 4 pages with 3 Questions only.
2. Answer **ALL** questions (**COMPULSORY**). The distribution of the marks for each question is given.
3. Please write all your answers in the Answer Booklet provided.

PART A: Answer ALL questions**QUESTION 1****CASE STUDY**

Suppose that you work for Merrill Lynch and that is your job to submit the bid for Treasury bills this week. How would you know what price to submit? Your first step would be to determine the yield that you require. Let us assume that, based on your understanding of interest rates, you decide you need a 2% return. To simplify, let us also assume you are bidding on securities with a one-year maturity. You know that the Treasury bill will pay RM1,000 when it matures.

Every Thursday the Treasury announces how many 28-day, 91-day, and 182-day Treasury bills it will offer for sale. Buyers must submit bids by the following Monday, and awards are made the next morning. The Treasury accepts the bids offering the highest price. The Treasury auction of securities is supposed to be highly competitive and fair. To ensure proper levels of competition, no one dealer is allowed to purchase more than 35% of any one issue. About 40 primary dealers regularly participate in the auction. As an alternative to the competitive bidding procedure, the Treasury also permits non-competitive bidding. You submit a non-competitive bid to purchase a 91-day RM1200 Treasury bill, and you find that you are buying the bond for RM1009.31.

In the early 1980s, Merrill Lynch created the Treasury Investment Growth Fund, in which it purchased Treasury Securities and then stripped them to create principal-only securities and interest-only securities. When a Treasury fixed-principal or inflation-indexed note or bond is 'stripped', each interest payment and the principal payment becomes a separate zero-coupon security. Now, suppose that Merrill Lynch introduced a new coupon bond in the market that pays interest semi-annually in an amount equal to the coupon interest rate times the face amount (or par value) of the bond. The semi-annual bonds have a 8% coupon rate, a RM1000 par value (maturity value), and mature in two years. Assume semi-annual compounding and the bonds being issued today with similar risk and maturity have coupon rates of 9%. Simultaneously, Merrill Lynch introduced speculative-grade bonds bearing in mind that there are many investors who would be willing to take on greater risk. Before the late 1970s, primary issues of speculative-grade securities were very rare; almost all new bond issues consisted of investment-grade bonds.

Merrill Lynch (ML) also experienced global financial crisis in 2007 which leads to one of the worst bear markets in the past 50 years.

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The global financial crisis had a major negative impact on the economy, leading to a downward revision of the growth prospects for U.S. companies, thus lowering the dividend growth rate in the Gordon model. ML's dividends grow at a constant rate of 7.85%. The most recent dividend that the company pays amount to RM2. Increased uncertainty for the U.S. economy and the widening credit spreads resulting from the subprime crisis would also raise the required return on investment in equity. The required return for ML's equity is 12%. In the early stages of the financial crisis, the decline in growth prospects and credit spreads were moderate and so, as the Gordon model predicts, the stock market decline was moderate. However, when the crisis entered a particularly virulent stage, credit spreads shot through the roof, the economy tanked, and as the Gordon model predicts, the stock market crashed. Between January 6, 2009, and March 6, 2009, the Dow Jones Industrial Average fell from 9,015 to 6,547.

With the increased volatility of interest rates that occurred in the 1980s, financial institution managers became more concerned about their exposure to interest-rate risk, the riskiness of earnings and returns that is associated with changes in interest rates. If you fail to manage interest-rate properly, there are higher chances of debacle. The manager of Merrill Lynch is asked to put assets and liabilities into more refined maturity buckets that enable him to estimate the potential change in income over the next one to two years. The assets in this period consist of RM3 million of securities maturing in one to two years, RM4 million of physical capital, RM9 million of commercial loans maturing in one to two years, RM10 million of securities maturing in greater than 2 years, and an additional RM3 million (20% of fixed-rate mortgages) that the bank expects to be repaid. The liabilities in this period consist of RM5 million of one-to-two-year CDs, RM15 million of savings deposits, RM6 million of one-to-two-year borrowings, RM5 million of checkable deposits, RM3.5 million of checkable deposits (the 10% of checkable deposits that the manager estimates are rate-sensitive in this period), and an additional RM4 million of savings deposits (the 20% estimate of savings deposits).

Being a manager of Merrill Lynch, you are also supposed to enter into a forward contract. You have previously bought RM5 million of the 6s of 2037 Treasury bonds, which currently sell at par value and so their yield to maturity is also 6%. Because these are long-term bonds, you recognize that you are exposed to substantial interest-rate risk and worry that if interest rates rise in the future, the price of these bonds will fall, resulting in a substantial capital loss that may cost you your job. You could hedge the interest-rate risk by involving in interest-rate forward contracts. As alternative way for you to protect against a rise in interest rates, and hence a decline in bond prices, is to buy RM5 million of put options written on the same Treasury bond futures.

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a. Based on the above case,

i) For a 91-day Treasury bill, what is the investment rate?

(3 Marks)

ii) A 182-day Treasury bill pays RM8,000 at maturity. This Treasury bill earns an annualized discount rate of 5.5%, what is the most you can pay for a 182-day Treasury bill?

(3 Marks)

iii) Define asset-backed commercial paper and its role in the global financial crisis in 2008.

(4 Marks)

b. Based on the above case,

i) You are asked to calculate what would be the appropriate price for the semi-annual coupon bond offered by Merrill Lynch.

(5 Marks)

ii) Explain why does Merrill Lynch need to insure bonds if any and how?

(5 Marks)

c. Based on the above case,

i) Calculate the current market price of Merrill Lynch stock.

(5 Marks)

ii) Discuss **TWO (2)** problems in estimating stock valuation.

(5 Marks)

d. Based on the above case,

i) Calculate the gap and the change in income if interest rates rise by 1.5% for the next one to two years.

(5 Marks)

ii) Merrill Lynch wants to know what happens to market values of assets and liabilities when interest rates jump from 1.5% to 4%. The current value of total asset is RM100 million and the total liability value is RM95 million. The duration for assets and liabilities is 2.08 and 1.70, respectively.

(5 Marks)

e. Based on the above case,

i) Define interest-rate forward contracts. If you involve in interest-rate forward contracts with another company, how do you complete this contract?

(5 Marks)

ii) List **THREE (3)** factors affecting the prices of option premium.

(3 Marks)

iii) List **TWO (2)** major concerns with the use of financial derivatives.

(2 Marks)

(Total: 50 Marks)

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PART B: Answer ALL questions

QUESTION 1

a. A securities market is a market where securities are traded either on physical or electronic exchanges.

Discuss **FOUR (4)** ways to overcome Lemons problems in Malaysian securities markets. (20 Marks)

b. Louis analyses two Malaysian commercial banks' financial performance in *Bursa Malaysia* for investing. The measures of bank profitability for two banks are shown in the following table:

	MayBankBerhad	AmBank Berhad
Equity Multiplier	14	12.3
Total Assets	RM56 million	RM123 million
Return on Assets	1.05%	1.15%
Net profit after taxes	RM1 million	RM2.5 million
Bank Capital	RM4 million	RM10 million
Reserves	RM25 million	RM12 million
Total Debt	RM0.5 million	RM1.6 million

Compute return on equity of these banks and advise Louis on which bank he can invest.

(5 Marks)
(Total: 25 Marks)

QUESTION 2

a. Nova Wellness Group Berhad has just paid an annual dividend of RM0.32 per share. Its dividend is expected to double for the next four years. After year 4, it will grow at a more modest pace of 1 percent per year. The required return is 13 percent. Calculate the current share price of Nova Wellness Group Berhad.

(10 Marks)

b. The well-developed secondary market for money market instruments makes the money market an ideal place for a firm or financial institution to warehouse surplus funds until they are needed.

Explain **FIVE (5)** types of money market securities which can be traded in Malaysian Money Market.

(15 Marks)
(Total: 25 Marks)

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